Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

nl

LIBRARY
RECEIVED
★ DEC 14 1933 ★
U. S. Department of Agriculture

NEWS LETTER

BUREAU OF PLANT QUARANTINE

UNITED STATES DEPARTMENT OF AGRICULTURE

Number 36 (NOT FOR PUBLICATION) December 1, 1933.

(The contents of this number, unless specifically stated otherwise, cover the month of October only)

FOREIGN PLANT QUARANTINES.

RECENT ENTOMOLOGICAL INTERCEPTIONS OF INTEREST

Mediterranean fruit fly from Spain.--One hundred and ninety-six living larvae and 3 pupae of Ceratitis capitata Wied. were intercepted at Baltimore, Md., in 26 peaches in stores from Spain. The vessel on which the infested peaches were found cleared Baltimore for Port Tampa, Fla.

Mediterranean fruit fly larvae in apple.--Four living larvae of Ceratitis capitata Wied. were intercepted at Philadelphia in one apple in stores from Spain.

Bean pod borer from China.--A larva of Maruca testulalis Geyer was intercepted at Seattle, Wash., in green beans in stores from China. This represents the first record of this pyralid being intercepted from China by inspectors of the Bureau of Plant Quarantine.

Hemipteron on Inga laurina.--An adult of Macrocephalus gracilis Handl. (Phymatidae) was collected on Inga laurina in the field at Aibonito, P. R.

Earwig from Australia.--Spongiphora australiana Mjoberg was intercepted at San Francisco with logs in cargo from Australia. This earwig is not known to occur in the continental United States.

Weevil larvae from Norway.--Larvae of Curculio micum L. (Curculionidae) were taken at New York on filbert nuts in husk in baggage from Norway. The nuts showed numerous exit holes.

Cabbage and cauliflower infested.--Larvae of Baratha brassicae L. (Noctuidae) were intercepted at Boston on cabbage in stores from the Netherlands and on leaves of cauliflower in stores from England and Germany.

Thrips on heather blossoms.--A female of Thrips dilatatus Uz. was intercepted at Philadelphia on heather blossoms in the mail from Scotland. J. R. Watson, of

Gainesville, Fla., reports that this species is not known to occur in this country.

Bruchid in lentils.-- Bruchus lentis Frolich. was intercepted at San Francisco in lentils (Lens esculenta) in cargo from Italy. This bruchid is not recorded from the continental United States. It confines itself to lentils, a staple food product.

European corn borer from Japan.--Larvae of Pyrausta nubilalis Hbn. were intercepted at Seattle, Wash., in ears of green corn in stores from Japan.

New to National Museum collection.--Telephanus diabolicus Nev. (Cucujidae) was taken at Mobile, Ala., in banana debris in cargo from Nicaragua. W. S. Fisher, of the Bureau of Entomology, reports that this species is new to the National Museum collection.

Weevils in packing material.--The following living weevils were intercepted at Washington, D. C., in moss and other packing material around rose plants in the mail from Czechoslovakia: Apion seniculus Kby., Ceutorhynchus atomus Boh., C. floralis Payk., Phytobius quadrituberculatus Fab., and Strophosoma rufipes Steph.

Bark beetle from the West Indies.--An adult of Stephanoderes trinitatis Hopk. (Scolytidae) was taken at Boston on ginger in the mail from Montserrat. M. W. Blackman, of the Bureau of Entomology, states that this bark beetle is not known to occur in this country.

Larvae of the vine moth from Italy.--Two living larvae of Polychrosis botrana Schiff. (Tortricidae) were intercepted at New York in grapes in baggage from Italy. This insect, which is known as the vine moth in Europe, is very injurious to the blossoms and fruit of the grape. A previous interception from Italy was made in 1928. It is not recorded from the United States.

RECENT PATHOLOGICAL INTERCEPTIONS OF INTEREST

Ginger diseases.--Some ginger from China, intercepted September 23 at Buffalo was found to be infected with Ceratostomella sp. Another lot of ginger received a few days earlier, September 14, was infected with Stachybotrys sp. (near S. papyrogena). This is our first interception of a Ceratostomella on ginger. The only previous interception of Stachybotrys was on cactus from Brazil in 1915.

Fungus on kudzu.--An interesting fungus found at Buffalo last July 7, on kudzu from China, has been determined as Stilbum incarnatum by Miss E. K. Cash, of the Bureau of Plant Industry. This is our first interception of this fungus.

Raphiolepis disease.--A disease found on Raphiolepis delacourtii being grown under special permit at Washington, D. C., has been determined as Sphaeropsis sp. (? S. eriobotryae) by Miss E. K. Cash.

Bamboo disease.--A fungus in discolored tissue of bamboo from China, intercepted at New York September 14, was determined as Acrothecium bicolor by Miss V. K. Charles. This is our first interception of this fungus.

Croton disease.--Phyllosticta sp. (not P. portoricensis or P. crotonophila), was Miss Cash's determination of a disease of croton leaves and stems from South Africa intercepted at Philadelphia.

Orchid disease.--Gloeosporium cattleyae was found on Cattleya plants from Venezuela being grown under special permit in Puerto Rico.

Another nema intercepted.--Diseased hyacinth bulbs from Holland, intercepted at New York on October 10, were found to be infested with Paraphelenchus maupasi. While this is our first interception of this nema, it has been found several times in different parts of the world in several different types of material including coffee trees. Very little seems to be known regarding its importance. Dr. Steiner reports that this was an unusually heavy infestation.

COFFEE BERRIES INFESTED WITH FRUIT FLY LARVAE

In spite of the cooperation extended by shipping companies on the Pacific routes, inspection of Oriental vessels in the port of San Francisco often discloses the presence on board of fruit brought from Hawaii in violation of Quarantine No. 13, which requires that all such fruit shall have been disposed of beyond the 3-mile limit when the ship enters a mainland port. In a recent arrival of this sort from Yokohama via Honolulu the inspector found two avocados of Hawaiian origin in the pantry ice box, which the purser claimed had been overlooked in making his routine inspection. Two branches of coffee berries were also found in the room of the chief cook and a similar branch in the crew's quarters. The berries on both lots were found to be heavily infested with larvae of the Mediterranean fruit fly. The fruit was destroyed on board the vessel and the failure of the ship to comply with quarantine regulations was brought to the attention of the steamship line concerned.

THE GRAF ZEPPELIN BRINGS MORE PESTS

As an indication of what we might expect in the way of pest-carrying possibilities in the new lighter-than-air type of transport a record was made (S.R.A. 1928, p. 159) of the finding of seven insects and two diseases in flowers in passengers' quarters in the Graf Zeppelin on her premier visit to this country, October 15, 1928. This now famous airship again visited us on August 4, 1929, and again (S.R.A. 1929, p. 250) the inspectors looked over flowers in the passengers' quarters and found eight species of thrips. Once more this veteran giant of the air has touched our shores and at Miami, Fla., October 23, 1933, plant quarantine inspectors boarded her and again found insects aboard. This time the stowaways were mostly scales on fruit in the crew's quarters,--oranges from Brazil bearing Aspidiotus hederae (oleander scale), Lepidosaphes beckii (purple scale), and Parlatoria sp.; a tangerine, likewise from Brazil, carrying Lepidosaphes beckii; and lemons from Italy affected by the oleander scale and the purple scale.

No claim is made that the insects or diseases found aboard the airship in all three visits were serious pests. The disturbing feature of the whole matter is that on all three occasions there were pests present on the air liner, and if we are to accept these visits as an augury of the role future air traffic may play in transporting plant pests the picture is none too reassuring.

THE CLOTHES ENCLOSE BUT THE NOSE KNOWS

Story reported from Brownsville, Tex., in connection with a case of seizure and fine.

"A bus with a number of passengers drove up and stopped at the customs station. Mr. Williamson, our inspector, boarded the bus while Mr. Eckel, the customs inspector, was checking the passengers through the open windows along the side of the bus. Neither Mr. Williamson's nor Mr. Eckel's inspection revealed anything of a contraband nature. However, when the inspectors met each other at the end of the bus, Mr. Eckel complained that he smelled oranges and suggested to Mr. Williamson that they have all of the passengers get out of the bus. Accordingly they so ordered it, and the last person to rise, a fat Mexican woman wearing a voluminous skirt, let a sack containing two oranges fall from the folds of her dress. It seems that quite a few people can locate the presence of guavas on account of the aroma of the fruit, and I have heard inspectors say that apples could be detected from the odor they give, but Mr. Eckel's feat of standing on the outside of a bus and detecting by scent only the presence of two oranges hidden in the dress of a passenger rates him number one with me as far as sense of smell goes. The anticlimax of this story is that one of the oranges contained seven *Anastrepha* larvae which are being forwarded."

PASSENGERS BRING FRUIT FLIES TO PROVIDENCE

(As reported from the Boston, Mass., office)

"On Friday, October 20, the French S. S. *Sinaia* arrived at Providence, R. I., with 88 passengers and a small amount of cargo. There were only 12 interceptions of contraband made in the baggage, 4 of which might reasonably be called hosts for Mediterranean fruit fly--2 from the Azores and 2 from Portugal. All 4 of these interceptions were found infested with the fruit fly.

"One interception of particular interest consisted of a basket containing 5 quarts of sorbus apples (about 500 fruits) packed in sawdust. I placed this basket in a small corrugated box when it was brought back from Providence for examination. When I took the basket out of the box, I noticed larvae crawling and jumping from the basket. The material was immediately placed in a tight container in order that there might not be any further escape. About 30 larvae were found in the corrugated box and all but 3 of these pupated during the night. We went throug the sawdust as carefully as we could and obtained 475 larvae and pupae from this material. There are still about 4 quarts of the apples to be examined and we are finding larvae in about 90 percent of the material. These sorbus apples were from the Azores.

"There were also 9 quinces, from Portugal, and 7 of these were infested with fruit fly larvae. The infestation per infested unit was as follows: 42, 31, 10, 7, 6, 4, and 3 (all living larvae). A lot of 13 pomegranates (from Portugal) and a case of 193 apples (from the Azores) were also quite heavily infested."

DOMESTIC PLANT QUARANTINES

Arrangements are being made to place on the quarantine mailing list, airline companies carrying mail or express shipments interstate from regulated areas, as it is found that cut flowers are frequently shipped by this method of transportation.

DUTCH ELM DISEASE

A conference at which plant quarantine officers, phytopathologists, foresters, and others, discussed the problems arising from the New Jersey and New York outbreak of the Dutch elm disease was held at Washington on October 26. At that conference R. Kent Beattie, representing the Bureau of Plant Industry, stated that the number of trees found infected this season up to that time was 603 in New Jersey, 46 in New York, 1 in Connecticut, 1 in Maryland, and 1 in Ohio; a total of 652. The safeguards employed by the State of New Jersey to keep infected trees from being shipped outside the infected areas, were described by representstives of the New Jersey State Department of Agriculture.

PLANT EXCHANGES

Plant exchanges suggested by radio are frequently found to be the source of inspiration under which private gardeners arrange to ship narcissus bulbs or other plants in the hope of obtaining new varieties in return. Such shippers are generally unaware of State nursery inspection requirements or special Federal quarantines. A plant distribution agency at Chicago, over Station WLS, is aiding in quarantine enforcement and the prevention of spread of pests by sending letters to prospective shippers containing a statement of the existence of plant shipping regulations and the addresses of officers from whom full information can be secured.

TERMINAL INSPECTION IN PUERTO RICO

The Territory of Puerto Rico has established terminal inspection of parcel-post shipments of plants and plant products under the provisions of the act of March 4, 1915 (Sec. 596, Postal Laws and Regulations). The inspection service is maintained at San Juan only.

TRANSIT INSPECTION

Office space in the new Post Office Building at Kansas City in Room 412, next to the sorting room, has been provided for the use of transit inspectors.

Two State inspectors are assisting at New York City in checking plant shipments in transit for compliance with State and Federal regulations. It is expected that they will continue working throughout the winter, making from four to five men available there for the season.

Federal inspection has been discontinued for the season at Kansas City and Omaha, but a State inspector expects to check on shipments at the former point. At Milwaukee also it is expected that a limited amount of State inspection will be carried on.

Day and night tours being made by the Chicago force during the fall season cover 10 mail and express stations and involve inspections from 6:30 a.m. to 2:30 a.m. Freight inspections are made possible through the cooperation of freight agencies in providing information by telephone of consignments containing plant material. At the new Post Office Building 75 percent of the plant shipments are found at the "sack dump" on the 6th floor, where the shipments may be examined before, they reach the conveyor belts which eventually carry them to the reservoirs where they are separated and dispatched to the State tables. At the Bureau of Plant Quarantine work bench inspection is made of packages which have been held out for that purpose by postal employees, put in gurneys, and pushed to the bench from the various chutes.

PHONY PEACH DISEASE

The Arkansas State Plant Board recently modified Rule 18 relating to phony peach disease and announced that, before issuing permits to nurserymen located in the infected States, special inquiry will be made as to satisfactory inspection and proper sanitary measures. Alabama and Louisiana have placed new regulations on interstate and intrastate movement of the host plants. In the case of Alabama certification is based on (1) a disease-free county; or (2) mile-radius inspection; or (3) culling to eliminate borer-infested trees. In Louisiana the destruction of all infected trees in the State is required and certification for shipping is based on conditions similar to (2) and (3) above.

DATE SCALE ERADICATION

During the month of October the Webb Subdivision was carefully inspected and no scale found. This planting of 3,285 date palms, varying in height from 10 to 35 feet, was first found infested in July 1929, during the first careful survey of the Coachella Valley. Two inspections were made in 1929 and 307 palms found infested; in 1930, 7 inspections were made and 92 palms found infested; 6 inspections were made in 1931 and 2 palms found infested; 4 inspections were made in 1932 and no scale found; 2 inspections were made in 1933 and no scale found.

This planting is in a locality where date plantings are few and widely scattered and the early scale history fairly well known, so an idea of the spread and development of the scale can be obtained. Only 5 plantings, including the Webb Subdivision, within a radius of over 2 miles have ever shown scale. A few of the offshoots in the original planting of the Narbonne Ranch, a planting of over 3,000 palms about 1 mile east of the Webb Subdivision, were infested but were cleaned up before there was much spread within the garden. The U. S. Department of Agriculture has a planting on an Indian Reservation about one-half mile west of the Subdivision. Several infested offshoots were set in this planting but were cleaned up before any spread occurred. Scale also showed on some of the original offshoots used in planting the subdivision but these also were cleaned up early with no great spread. The Government planting and the Norbonne Ranch may be safely eliminated as cause of the infestation on the subdivision because the infested palms were small and the infestation not severe. Also, the early infestation on the subdivision itself may be eliminated as the origin of the present infestation, because there was no indication of deep-seated leaf base infestation, no very heavily infested palms were found, and very little leaf base infestation.

Two possible sources of the infestation remain. The most logical is the Churchill planting, located approximately 1 mile southeast of the Webb Subdivision. In the spring of 1923 (approximate date) Mr. Churchill obtained 21 seedling and 8 standard variety palms and planted them on his place. The property from which Mr. Churchill got his seedling palms was later found infested. The Churchill property was not inspected until August 1927. At that time several palms were white with scale. (The term, "white with scale" is used to describe a very severe infestation, the natural green color of the foliage being covered by the white of encrusted scale.) When the Churchill infestation was found it was immediately treated so no further spread was possible. If the Churchill property was the source of the infestation on the subdivision, it is probable that movement of scale began in 1926 and continued in 1927.

The other possible source is the Graham planting located between 1 and 1½ miles northeast of the subdivision. Mr. Graham had several hundred seedling palms in unthinned nurseries. He obtained 11 standard variety offshoots from an infested planting in the spring of 1921. The offshoots were inspected when moved but showed no scale at the time. There was evidently scale on them at the time of the inspection, probably behind the fiber, which spread over the foliage of the palms later, as they were found heavily infested when inspected in May 1926. The scale had spread to the seedling nursery by that time. During the 1929 inspection another group of seedlings in the mesquite on this place, which had escaped observation until that time, was found heavily infested.

JAPANESE BEETLE AND EUROPEAN CORN BORER

Exclusive Japanese Beetle Work

Succinct summaries of the results of the canvass and survey during July and August of farms, golf courses, estates, city properties, and cemeteries disclose some interesting information concerning expenditures for control of the Japanese beetle and actual losses from crop destruction by the insect. Twenty-nine golf clubs reported average annual expenditures of $618 per course for Japanese beetle grub control. These courses reported total expenditures for this purpose of $60,000 over a period of years. The yearly total cost of trapping, spraying, and sod treatment on 19 private estates averages $513 per estate. Average annual expenditures of $225 per unit were reported by superintendents of 11 cemeteries, parks, and community spraying organizations. In the city block canvass, inquiries were made of residents in four blocks each in Philadelphia and Trenton, two blocks in Princeton, N. J., and one block in Lawrenceville, N. J. These blocks were selected at random. Expenditures by individual property owners in these blocks average $2.50 per year. Annual expenditures per block were $62.80. Nineteen growers whose field corn plantings totalled 511 acres supplied statements showing that their corn crop was injured to the extent of from 3.5 to 80 percent. Their cash losses totalled $2,540, or an average of approximately $5 per acre. Thirteen sweet corn growers with 195 acres of this crop reported crop losses averaging 35 percent through beetle injury. The average loss per acre was approximately $17.50. Commercial orchardists whose holdings include 37,000 bearing apple trees reported an average fruit injury of 43 percent on 6,300 apple trees of the varieties susceptible to beetle injury. Crop loss through this injury amounted to $12,200. Eleven of the 13 reporting orchardists applied sprays specifically for Japanese beetle control at a total cost of $700. The average apple injury per acre was $123. The average control cost per acre was $7.15. Commercial peach orchards covered in the survey include 10,600 trees of the varieties particularly subject to Japanese beetle injury. The normal yield of these varieties was reduced 27 percent, resulting in loss of sale of 9,100 bushels valued at $12,500. Ten of the 18 orchardists attempted spray control at a total cost of $712. This was an average injury per acre of $154, and an average per acre expenditure for control of $8.80. The survey also extended to 28 farms, comprising 3,480 acres. Total crop damage sustained by these farmers amounted to $6,130, or an average per farm of $219. This was an average per acre loss of $1.76. The canvass also included cost of control and crop losses by growers of grapes, raspberries, strawberries, blueberries, and greenhouse-grown roses.

Somewhat of a record was established for quick termination of a prosecution brought under the Plant Quarantine Act for a violation of the Japanese beetle quarantine regulations when on October 23, Lynn F. Stout, of Charlottesville, Va., was fined $10 for illegal transportation of uncertified potted ferns and cut flowers from Chambersburg, Pa., to Charlottesville. On October 1, the defendant was stopped at the Japanese beetle vehicular inspection station on the Maryland-West Virginia line near Williamsport, Md. He was carrying three potted ferns and a large bunch of cut cockscomb. Mr. Stout refused to permit the inspector to remove the soil from the ferns and would not return the same to the regulated area or surrender them to the inspector. Despite the inspector's warning, the defendant drove on to his destination with the uncertified plant material. After preparation of the necessary papers, a complaint was filed against the defendant on October 18 before United States Commissioner Claude R. Yardley, at Charlottesville. A Deputy Marshal from Roanoke arrested Mr. Stout on October 19 and took him before the Commissioner. The defendant was released on his own recognizance for a hearing in Harrisonburg at 9 o'clock on the morning of October 23. The United States District Court opened its fall term in Harrisonburg on October 23 and Commissioner Yardley had other business there on that day. United States Attorney Shaffer, of the Western District of Virginia, was present at the hearing, at which time the defendant pleaded "guilty." An information prepared for the occasion was then handed to the United States Attorney and the case was taken directly into court and disposed of early in the afternoon. Details of the violation were related to the court by the intercepting inspector. The defendant, in substance, stated that he did not think the quarantine was such a serious matter and thought that the inspector would be "human" and not report him for the violation. Although the fine imposed was quite small, the speed with which the case was terminated should have a good effect on those who learn through the press of the prosecution.

Activities in classified nurseries greatly increased during the month of October, as compared with September. In New Jersey, approximately twice as many plants were certified for shipment to points outside the regulated zone and five times as many shipments were certified for movement between classified dealers within the restricted territory. During October, 239 carloads of sand were certified as compared with 71 carloads in September. Almost twice as many certificates were issued and double the number of inspection calls were made, as compared with September. Larger quantities of plants were certified for movement within the regulated sections than in October 1932. A large nurseryman in southern New Jersey states that their fall business this year is the greatest of any year since 1929. It is reported that an air of optimism seems to pervade the nursery industry. Individual orders are not large, but nevertheless considerable stock is moving and will continue to move through November. Material certified for mail order houses continued to increase in quantity. Shipments from the wholesale seed houses of Philadelphia are also reported as heavier this year than last. Throughout the entire area 3,140,462 plants were certified from Class III establishments for movement to nonregulated territory. In October 1932 there were 1,621,907 plants certified for similar movement. This evidences a considerable increase in volume of trade, since there has been a net increase of only 65 Class III establishments, whereas there was effective on January 1, 1933, an extension of the regulated territory which opened up 46,351 square miles additional within which shipments to individuals or firms other than classified dealers may move without certification.

Before lead arsenate could be sprayed on approximately 5 acres of backyard garden areas in the infested sections of Erie, Pa., it was necessary to remove over 8 tons of refuse, consisting principally of old tomato vines, cornstalks, and unripened crops of kohlrabi and endive. Not until late in October did the city experience its first killing frost. Due to the inadvisability of spraying with arsenate of lead the soil in gardens of growing vegetables, application of the poison was necessarily delayed until the gardens could be cleared off. Refuse from over 300 gardens was collected in a 1½-ton Government truck and hauled to the city incinerator for burning. Eight laborers for this work were supplied by the Erie County Emergency Relief Board. Rakes used in the clean-up work were loaned by the officer in charge of the county community gardens. The majority of the yards in which the work was performed were in foreign sections of the city. In such cases, men from the crew who spoke the language of the tenant were delegated to explain the work to the individual from whose yard the refuse was to be removed and in which the garden area was to be sprayed. Six days were required for removal of the debris. Six additional days were required for applying the lead arsenate. For the first 2 days of treating, a rotary plow was used for working the lead arsenate into the upper 3 inches of soil. This worked satisfactorily in large plots, but could not be manipulated in small garden plots surrounded by hedges or fences. Most of the soil insecticide was worked into the soil with hand rakes.

Operation of the mobile patrol of four road inspectors on exit highways at the boundary of the regulated zone in northwestern New York was discontinued on October 16. The State-employed road inspectors were dismissed on that date and the trucks and roadside equipment brought to the New Cumberland, Pa., warehouse for overwinter storage. This cooperative road inspection work began on April 12, when four inspectors, three of whom were supplied with Government trucks, began part-time operations on nine highways. Staggered schedules permitted the inspectors to alternately check west-bound traffic leaving the regulated zone. From early in July until late in September, locations of four posts were changed to intercept traffic which had been rerouted to avoid the regularly guarded inspection posts. The post on the Corning city line was in operation during a straight 8-hour shift, on which the inspector alternated his daily starting hours. When the work was discontinued, 10 roads were being guarded. At the end of October, the personnel at road patrol stations on the Ohio-Pennsylvania, Pennsylvania-West Virginia, Maryland-West Virginia, and Virginia-North Carolina lines, and in Virginia, was reduced from 53 to 42 men. Relief workers supplied through the Pennsylvania emergency relief organization accounted for 10 of the remaining road inspectors.

Lifting of quarantine regulations on the movement of cut flowers was effective at the close of October 15, as provided in the regulations. Removal of these restrictions was not coincident with the lifting of the quarantine on the movement of fruits and vegetables on and after September 15, since cut flowers are still likely carriers of the adult beetle late in the season. Cut flower inspectors in the wholesale cut flower marts in Philadelphia found the last beetles on cut flowers on October 5. Fewer adult beetles were found in cut flowers toward the latter part of this season than in previous years, although they were found in cut flowers as early as June 15, the effective date of the quarantine on this commodity. Philadelphia cut flower inspectors removed 342 beetles from shipments offered for inspection during the operation of the seasonal quarantine from June 15 to October 15. Of this total, 129 were removed from roses, 72 from spirea, 25 from dahlias, 19 from euphorbia, 14 from ferns, 11 from primula, 10 from gypsophila, and the remainder from 24 additional species of cut flowers. Facilities for the Philadelphia cut flower inspection are provided without cost to the Bureau by the two largest wholesale cut flower houses in the city.

Several carloads and a number of truck loads of soil-free nursery stock were shipped under certification from the Philadelphia area during October. Beetles in the open were quite rare during October, but two of them were found in a particularly heavily infested region near Narberth, Pa., on October 19. A few of the nurseries started to wash and store their supplies of fruit trees, shrubs, and rose bushes. The majority of this stock will be stored during November. According to a survey in the Philadelphia territory, approximately 500,000 plants will be placed in storage by classified dealers. This total does not include the thousands of dahlia tubers and canna roots to be washed, inspected, and stored for later certification. A survey of 16 wholesale seed houses in Philadelphia, in connection with State seed certification work, showed an increase in orders over last year. This is especially noticeable in seed orders from South American countries. Several seed houses claim that they have run short of certain bulbs. Philadelphia seed houses annually ship thousands of bulbs, corms, and tubers to every State in the Union, and export large quantities of seeds to many foreign countries.

Authority has been granted by S. B. Fracker, in charge of enforcement of the white-pine blister-rust quarantine, for Japanese beetle inspectors working from the Philadelphia district office to certify for movement to designated States shipments of five-leafed pines originating in a nursery establishment at Morrisville, Pa. Specific instructions for the blister-rust certification work have been issued to the individual inspectors. Where joint Japanese beetle and blister-rust certification is required, certification will be accomplished by the use of a joint certificate stamp legibly impressed on the shipping tag or label or on some conspicuous portion of the container, the number "63", to indicate the blister-rust quarantine, being inserted in a blank space after "48", which evidences Japanese beetle certification. On shipments requiring only blister-rust certification, the number "48" will be struck out and the figure "63" inserted. Reports concerning each tree certified under Quarantine No. 63 will be forwarded to the Division of Domestic Plant Quarantines of the Bureau as the shipments go forward.

Reports received this summer from three separate sources were to the effect that a Japanese beetle is the best bait with which to catch sunfish. Three Delaware River fishermen stated that every sunfish they cleaned this summer contained from six to nine Japanese beetles. Since the past summer's beetle flight resulted in millions of the insects being afloat on the Delaware River, the present generation of sunfish in that stream should be well fed. Several years ago, the largest fish dealer in Philadelphia stated that the best food for his small fish consisted of ground Japanese beetles. In preparing the food, the wings are removed, after which the remainder of the insects is dried in an oven and then ground to a fine powder. The same dealer found that some of his larger fish were killed when they swallowed beetles that alighted on the surface of the water in his tanks. It was necessary to screen the tanks during the summer, since beetles were numerous in his locality.

After a brief occupancy of office space on the seventh floor of the Custom House in Boston, R. S. Clifton and the personnel of the Massachusetts district Japanese beetle quarantine office transferred their headquarters to the fourth floor of the Custom House. Floor space 30 feet wide and 35 feet long is jointly occupied with the Boston gypsy moth personnel, in charge of H. I. Winchester. Desk room and file space for an employee of the Bureau of Immigration, Department of Labor, is also provided in one corner of the office. On two sides of the new office space there are partitioned offices of the Hydrographic Service of the Navy Department. Removal of the Boston quarantine office from 12 South Market Street to the seventh floor of the Custom House was accomplished on September 30, and transfer of the quarters within the Custom House took place on October 31. The Japanese beetle office still retains its old telephone number, Capitol 7487.

Chemical treatments made during the month of October included carbon disulphide fumigation of 33 field-grown plants. Arrangements were made for similar treatment of 583 additional plants during November if the soil temperature remains above 40° F. Hot-water treatment was given to 273 blueberry plants, which treatment will continue into November. Over 800 cubic yards of potting soil were fumigated or sterilized. Most of this was fumigated with carbon disulphide in the usual air-tight soil boxes. About 40 cubic yards were steam sterilized, and smaller quantities were treated with lead arsenate and flake naphthalene. Surface soil to the extent of 3,352 square feet was treated with carbon disulphide to permit lifting of nursery stock therein, and 376 square feet of nursery area was poisoned with lead arsenate.

Approval was granted during October for subdivision into Class I and Class III sections of nine unit nursery properties. Class III subdivisions, containing infestations, are clearly marked by boundaries of a permanent nature to segregate stock therein from uninfested portions of the premises. Areas within a 500-foot radius of the points of infestation are designated as Class III. Under the "split classification" provision of the regulations, establishments which otherwise would fall in Class III due to the finding of one or a few beetles on the premises are enabled to operate in a limited portion of the establishment on a Class I, or uninfested basis. Of the nurseries subdivisions approved, two are in New York and seven in Pennsylvania.

Continuous inspection service, requiring the stationing of an inspector at the nursery, was rendered at nine nurseries during October. At five New Jersey nurseries, single inspectors were stationed during the month. At one of these nurseries an inspector was occupied most of the month in inspecting 180,000 geranium cuttings which were made soil-free before certification. Two of the larger New Jersey nurseries required two inspectors each. Single inspectors were required in one nursery each in Pennsylvania and Delaware. It is anticipated that two additional New Jersey establishments will require the services of a full-time inspector for several weeks during November.

Stripping operations at sand pits were supervised during the month at most of the regular sand-shipping establishments. This supervision will continue into November. As provided in the regulations, an inspector supervised the removal of the upper 12 inches of soil from the sand pit or field operation. Supervision is particularly needed in the case of molding sand where only a narrow vein of the desirable sand exists at shallow depths. Regular sand pits frequently uncap considerable areas, requiring continuous presence of an inspector for 3 or 4 days.

What few traps were still in operation at the end of September in a limited number of localities in New Hampshire, Vermont, and New York, and in Erie, Pa., were lifted during the first week in October, repacked, and returned to the New Cumberland, Pa., warehouse. Final tabulations of the season's trapping results were distributed in mimeographed form to the nurserymen, State officials, and others in attendance at the conference to discuss the season's developments in the Japanese beetle situation, held at Washington on October 24.

At the annual conference of the entomological workers of Connecticut, held at the Agricultural Experiment Station at New Haven on October 27, J. P. Johnson, district Japanese beetle supervisor for Connecticut, read two papers, one by L. H. Worthley on "Developments in the Japanese Beetle Situation in 1933", and the other detailing Mr. Johnson's activities in connection with the Japanese beetle and European corn borer in Connecticut during the past year. Including visitors from surrounding States, there were 60 men in attendance at the conference.

Possible quarantine action as a result of this year's trap finds was discussed to the mutual satisfaction of nurserymen and State and Bureau officials in attendance at the combined conference and public hearing held in Washington on October 24. Mr. Hoyt presided. Preliminary to the discussion, Mr. Worthley read a paper on "Developments in the Japanese Beetle Situation in 1933."

Corn Borer Activities

Surveys in Connecticut to ascertain the extent of commercial damage by the European corn borer and the degree of borer population in the State were made under the supervision of J. P. Johnson, from July into late October. Thirty-nine farms on which were grown 192.5 acres of early sweet corn were visited. Total damage was reported amounting to $11,321.38, or an average of $58.81 per acre. Thirty-seven growers having a total of 32.5 acres of late sweet corn experienced a net loss of $850, or an average of $26.15 per acre. The borer-population count, made during October, included the same towns in which a similar survey was made in 1932. A large increase in borer population was indicated. With the exception of two towns, an average annual increase of 100 percent was observed. The survey was made in sections adjacent to New London, Glastonbury, and Milford.

MEXICAN FRUIT FLY

Rainy weather hindered trapping operations considerably during the first part of October. However, by the last of the month more than 5,000 of the new globe-shaped glass traps were in operation in 466 selected groves throughout the quarantined area. Since the operation of these traps was new to all of the inspectors, it was necessary to work out a technique of handling. The speed of operating the traps was increased from about 60 per day per inspector the first few days they were operated to around 100 per day by the end of the month. The greatest obstacle to the handling of the traps was the large numbers of moths which were attracted to them. In a number of counts of the insects in the traps made at 2-day intervals, an average of 65 Lepidoptera were taken from each trap. The odor emanating from the decaying bodies of these moths was exceedingly nauseating to the inspectors and in all probability masked the attractiveness of the bait. A number of ideas were tried out looking to the exclusion of the moths and at the same time not interfering with the rapidity of operating the trap or their effectiveness in catching flies. The simplest method evolved was to insert a semicone of 1/4-inch hardware cloth in the inverted opening of the trap. The screen was held in place by a wire which was passed through the neck of the trap. In tests made with traps thus equipped, an average of only 5 Lepidoptera were taken per trap, while 18 more Diptera were taken per trap than in unscreened traps. The cost of equipping each trap amounted to only one half cent.

With the exclusion of the moths, the amount of bait required per trap can be reduced, resulting in a material saving in the cost of operating. Where moths were getting in the traps, it was found that only 10 or 12 traps could be serviced with a gallon of bait; this number can be practically doubled when the moths are excluded.

Very little evidence of the hurricane of September 4 and 5 remained to be seen at the end of the month. Residences and buildings had been repaired and the rubbish cleared away. In the drier portions of the Valley the groves had been pruned and disced, and with the new crop of foliage, it was difficult to realize that they had been through the storm. However, water was still standing in many of the poorer drained groves and comparatively few had dried sufficiently to permit cultural activities to be resumed. Quite a heavy mortality was observed among the trees in the eastern part of the Valley as a result of the wet soil.

Very little fruit was shipped during the month. The fruit remaining on the trees was in a growing condition due to the warm temperatures and abundant moisture in the soil. Difficulty was experienced in finding groves of seeded fruit that would pass the State maturity test, and practically no groves of seedless fruit would meet the requirements. In addition to the scarcity of ripe fruit, the markets were weak, and most growers with commercial quantities of fruit preferred to hold it and gamble on the price going up. Approximately 140 carloads of fruit were shipped during October, 75 percent of which was moved by truck. Ninety-nine permits were issued for interstate shipments of fruit by truck. These shipments went to 11 different States.

Oranges arriving in Matamoros from the Montemorelos area of Nuevo Leon, Mexico, were found to be lightly infested with larvae of the fruit fly.

PINK BOLLWORM

A new outbreak of the pink bollworm was discovered in the western part of Texas the latter part of October. The first specimens were taken on October 17 in trash from a gin in Gaines County. There are four gins in this county and specimens have since been found in trash from all of them. Additional specimens have been found in gin trash at Shacktown in the northwest part of Dawson County, at Brownfield in Terry County, and at Levelland in Hockley County. Specimens were also taken in trash at Brownfield from cotton which was produced in Lea County, N. Mex. As ginning was at the peak it was impracticable to install sterilizers to treat the remaining seed. Arrangements were therefore made with the 24 gins involved at the end of the month to ship all seed to designated oil mills. Arrangements were made with the 7 oil mills which were designated, to handle the seed in such manner as to avoid spreading the insect. Arrangements were also made with the ginners to ship the baled lint to certain compresses for segregation and compression. It is of interest to note that a number of the ginners have had previous experience in operating under the pink bollworm regulations, and they are all giving wholehearted cooperation in handling the situation. It is planned to sterilize all planting seed for the next crop. It is thought that under the above arrangements the situation is being very well taken care of.

During the month of October every possible effort was made to locate any additional infestation of the pink bollworm in northern Florida and Georgia through the use of gin-trash machines. At the peak of the inspection nine machines were in operation, a trained pink bollworm inspector being in charge of each machine. A considerable amount of trash was inspected without finding any additional specimens.

Field inspections were also continued, with a personnel of 16 Federal and State inspectors. The inspections were, of course, most intensive in the vicinity of gins where specimens were found, but at the same time other areas were also covered. It was not until October 27 that specimens were found in the field. On that date 3 pupae and 6 larvae were found in a field 2½ miles south of Enigma, Ga. On the following day another specimen was found in a field about one fourth mile from the first field. The fact that it took the men so long to locate specimens in the field is a further demonstration of the value of the gin-trash machines in detecting light infestations. At the close of the month there was not a great amount of material left in the fields, but the inspections will be continued as long as practicable.

In the regulated area of Florida only 281 bales were ginned during the month. All of the trash from this cotton was run through a gin-trash machine without finding any specimens of the pink bollworm. There is very little cotton remaining to be ginned, so that field and gin-trash inspections are just about completed in this area; however, a supply of green bolls has been collected for later laboratory inspection.

The necessity for concentrating men for inspections in Georgia made it impossible to carry on the daily collection and examination of cotton blooms from the plats at Chapman Field. Arrangements were made with the Bureau of Plant Industry to collect and destroy all cotton blooms daily while the inspector is away. The examination of these blooms will probably be resumed during the coming month.

During the month of October gin-trash inspection was carried on in all of the regulated areas. As previously stated, the results were negative in the regulated area of Florida; also in the Salt River Valley and Tucson areas, Arizona. Specimens of the pink bollworm were found in each of the remaining areas. In the Pecos Valley of Texas and New Mexico the infestation seems to be heavier this season than ever before, but it has not reached the point where any commercial damage is being done. In the remaining areas infestation seems to be about the same as last year, or possibly lighter in some areas. In the Big Bend area of Texas the number of specimens being found in gin trash had increased considerably toward the end of the month; however, in only one or two fields was the damage very heavy, due to the program carried out last fall and winter. This program did not include the acreage in Brewster County, and this year the infestation is very heavy. Counts were recently made at 18 different points in a 20-acre field, which showed that 53.3 percent of the cotton was nonpickable. The owner of this field stated that the counts were very conservative, and that if anything were too low. Earlier in the season he estimated that he would get from 22 to 25 bales from this acreage, but he got only 7, and attributed the loss entirely to the pink bollworm. He further stated that the cotton he would get was damaged 40 percent in grade and staple. Arrangements have been made to clean up the acreage in Brewster County, which is small, and this work will get under way early in November.

A total of 844 cars was inspected at the Marfa road station during October, from which 10 interceptions were made. Of this number 6 were found to be infested with the pink bollworm, 32 living and 6 dead larvae being found. It is of special interest to note that 2 of the cars were en route to points in northwest Texas, where a considerable amount of cotton is grown, and 3 live larvae were found in one and 12 living larvae in another. It is quite possible that this could have been the means of spreading infestation. One of the other interceptions was rather unusual. It consisted of 10 pounds of seed cotton taken from a Mexican who was riding a burro from Ruidosa to Marfa, Tex., a distance of some 60 miles. The seed cotton contained 16 living and 1 dead larvae.

PREVENTING SPREAD OF MOTHS

Gypsy moth training schools were in operation during the greater part of October in Vermont, Massachusetts, and Connecticut. Additional men were secured through the National Reemployment Service and by the end of the month a total of 1,350 men were on gypsy moth work in these States and in New York. By the last week in October all training schools had been temporarily discontinued and the men transferred to regular scouting work in the barrier zone in southwestern Massachusetts, northwestern Connecticut, Vermont, and northeastern New York. A large proportion of the force is now stationed in towns in northern Vermont in order that this territory may be scouted before severe winter weather sets in. Although there has already been some snow, especially in the higher regions of Vermont, the weather as a whole has been very favorable for scouting. Weather conditions vary greatly within a radius of 5 or 6 miles in the mountain regions of northern Vermont. Men have found it possible to work in some locations on days when no work could be carried on in nearby towns because of bad weather. Some difficulty has been experienced in quartering the men in some small towns in northern Vermont as telephone and Christmas tree operators had taken available accommodations.

The scouting work done at Mt. Tabor, Vt., is being performed under difficult conditions. The Mt. Tabor woodland district consists of approximately 23,000 acres, and includes 16 mountain peaks and 6 lakes, including Lost Pond. Surrounding Lost Pond is an area of "quick mud", which has the same characteristics as quicksand. It has been reported that at least one man was drowned in this quick mud, and there are stories of several narrow escapes experienced by hunters. Mt. Tabor has no passable roads entering the town from the north, east, or south, and only one road from the west, which extends eastward about three quarters of a mile. To the end of the month over 10,000 acres of woodland had been scouted in this district. It is expected that scouting work will be completed here before Christmas.

It is encouraging to read in the reports from scouting supervisors that the crews are showing a marked improvement. Regardless of the difficulties the scouts have experienced due to the snow and the hilly and rocky conditions which have caused numerous minor injuries, they have shown an interest in the work and a desire to learn.

In the Pennsylvania area approximately 475 men were employed on gypsy moth work, about 150 of these being engaged in cutting brush and dead and decayed trees of no commercial value and favored as food by the gypsy moth. Except for a small number in training schools, the remainder of the men were engaged in regular scouting work.

The number of men now on gypsy moth scouting work in the Civilian Conservation Corps camps has increased over the previous month. Full assignment of men has not as yet been made and a further increase is expected. At the end of the month a total of 384 men were engaged in scouting work from five camps in Connecticut, nine in Massachusetts, and one in Vermont. During October, six foremen were appointed by the State Forester of Connecticut for gypsy moth work in the camps in that State.

The Boston quarantine office which has been located at 408 Atlantic Avenue was moved on November 3, and is now located on the 4th floor of the Boston Custom House Building, where quarters are being shared with the Japanese beetle project.

The Franklin County N.R.A. parade was held in Greenfield on November 1, about 10,000 marchers participating. All employees of this project stationed in Greenfield took part in this parade, and a large float was prepared and entered by this project. The truck was covered with pine, balsam, and laurel boughs combined with branches of oak, and presented a rather colorful picture.

The fall meeting of district quarantine inspectors was held at Greenfield on October 27. This meeting, held each year just prior to the start of the Christmas tree and greenery inspection season, is for the purpose of planning the inspection work and getting preliminary information on the number of carloads of trees to be shipped during the season. With this information in hand, plans can be made to provide for an extra number of inspectors if found necessary in order to insure satisfactory service to the shippers. Indications are that Christmas tree operators will start cutting later than usual, and for this reason it is possible that this may develop a rush at the end of the season to fill orders and may mean that more men for a shorter period of time will be needed for the inspection of the trees. The first Christmas trees for the coming season were inspected on October 28, the trees being cut in central Vermont and shipped to New York.

It is possible that future developments in the shipment of telephone cable reels and wire may have an effect upon the amount of material inspected and certified from the quarantined area. Every year many thousands of these reels are inspected and certified, but it has been reported recently that a few shipments from wire manufacturing companies have been coming into the quarantined area without being wound on reels. It is understood that this wire is shipped in coils and wrapped in heavy paper. Shipment in this way saves the additional weight of the reels and also avoids the return to the manufacturing company of the empty reels.

People often collect branches with brightly colored autumnleaves for home decoration, but these last only a short time and are discarded. At certain seasons of the year branches from deciduous trees are prepared by bleaching and then dyeing. Such dyed leaves are used for making wreaths and are usually in demand principally for Memorial Day. A recent shipment indicates that florists have devised a satisfactory method of handling and storing brightly colored autumnleaves for late use. An entire truck load of red oak branches of leaves was inspected and certifie recently for shipment to a New York florist. The branches were to be put in a refrigeration plant to remain there until the Christmas holidays when they will be used for decorative purposes. This is the first sizable shipment of this nature that has been inspected.

In general, shipment of various types of wood for fuel purposes is by carload or truck load. About the only exception to this is fireplace wood which is often shipped in much smaller units. It is probable that such small shipments of fireplace wood are intended solely for what might be called decorative purposes, as oftentimes people do not desire to have fires in their fireplaces, but only a few logs for the effect. Quite often those who spend vacations in the country before departing for home leave orders for specimen lots of fireplace wood to be shipped later in the season. Quite recently there have been a number of small lots of such wood shipped from one of the localities in the western part of the quarantined area by parcel post. It is very unusual to have fuel wood shipped in this manner.

* * * * *